

## R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

### CLAIM REJECTIONS UNDER 35 U.S.C. §112

The rejection of claims 5 and 15 under 35 U.S.C. §112, second paragraph, has been obviated by appropriate amendment and should be withdrawn.

### CLAIM REJECTIONS UNDER 35 U.S.C. §102

The rejection of claims 1, 8-9, 12 and 14-15 under 35 U.S.C. §102(a) as being anticipated by Patel '728 is respectfully traversed and should be withdrawn.

Patel discloses a digital television receiver that digitizes final I-F signals resulting from triple-conversion (Title).

In contrast, claim 1 of the present invention provides an apparatus comprising a first circuit, a second circuit and a third circuit. The first circuit comprises a first filter and a first mixer configured to generate an upconverted signal in response to mixing an input signal and a first oscillation signal. The first filter is implemented at a quality factor which allows (i) the first filter to filter undesired channels from the upconverted signal and (ii) the first mixer to be integrated on the same

integrated circuit as the first filter. The second circuit comprises a second filter and a second mixer configured to generate a downconverted signal in response to mixing the upconverted signal and a second oscillation signal. The second filter is implemented at a quality factor which allows (i) the second filter to filter undesired channels from the downconverted signal and (ii) the second mixer to be integrated on the same integrated circuit as the second filter. The third circuit may be configured to generate an output signal in response to mixing the downconverted signal with a third oscillation signal. The third oscillation signal is generated by dividing the second oscillation signal in the second circuit. The third circuit may be configured to filter undesired channels from the output signal. Claims 14 and 15 provide similar limitations. Patel fails to disclose such limitations.

While Applicants' representative does not necessarily agree with the Examiner's interpretation recited in the Office Action mailed July 28, 2005, Applicants' representative has amended the claims to further clarify the claimed invention. Patel is silent regarding implementing the first circuit and the second circuit with a quality factor that allows integration, as presently claimed. In particular, the first circuit implements the first filter with a quality factor that allows the first mixer and the first filter to be implemented on the same integrated circuit. Additionally, the second filter is implemented with a quality

factor that allows the second mixer and the second filter to be implemented on the same integrated circuit. Patel is silent regarding a filter and a mixer implemented on the same integrated circuit. Patel is also silent regarding a relationship between quality factors and chip integration. At best, Patel discloses an amplifier, an oscillator and a mixer circuit implemented on an integrated circuit (see Patel, column 19, line 47 through column 20, line 6). However, Patel is silent regarding a mixer being implemented on the same integrated circuit as a filter, as presently claimed. As such, Patel fails to disclose each and every element of the claimed invention and the rejection should be withdrawn.

As such, the presently claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

#### **CLAIM REJECTIONS UNDER 35 U.S.C. §103**

The rejection of claims 2, 3, 16 and 17 under 35 U.S.C. §103 as being unpatentable over Patel '728 in view of Narumi '811 is respectfully traversed and should be withdrawn. Claims 2, 3, 16 and 17 depend, directly or indirectly, from the claims 1, 14 and 15 which are now believed to be allowable.

As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

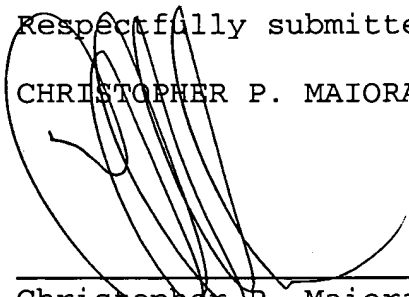
Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicants' representative at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,

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